STEM Professional Development Grant
Round II
February 1, 2012

REQUEST FOR PROPOSALS

and

GUIDELINES FOR SUBMISSION

FUNDING PROVIDED BY THE FEDERAL RACE TO THE TOP GRANT

Proposals due Monday, March 12, 2012
Grant Period: May 2012 – December 2013

I.   INTRODUCTION

In an effort to increase students' success in STEM education in Tennessee, the state is implementing several initiatives aimed at enhancing teachers' content knowledge and teaching practices. The Tennessee Higher Education Commission (THEC) is administering a competitive grant program to provide professional development to the state's K-12 teachers in STEM academic disciplines. STEM academic disciplines are defined as science (biology, chemistry, earth science, physics, and physical science), technology, engineering, and mathematics. Professional development programs funded through this competition will be accessible statewide through the STEM Innovation Network.

STEM Innovation Network
Tennessee is supporting a significant expansion of STEM education opportunities through the Tennessee STEM Innovation Network (TSIN). The TSIN is a public-private collaborative between the Tennessee Department of Education and Battelle Memorial Institute (Battelle) designed to promote and expand the teaching and learning of STEM education in K-12 public schools across Tennessee. Created through a $15.7 million allocation from Tennessee's First to the Top initiative, the TSIN will connect Tennessee's educational reform goals, connect existing, emerging, and new STEM education partners in a learning network intentionally designed to share best practices, enhance critical start-up efforts and strive to boost student achievement. Through this unique partnership and the sharing of effective STEM education practices throughout the state, Tennessee will not only expand education opportunities and outcomes, but also create new STEM teaching and learning models that can be shared with the nation.

STEM Professional Development Grant Program
The purpose of this program is to promote innovative practices in STEM education by further developing K-12 STEM teachers' pedagogical skills and content knowledge. In addition, the highly effective professional development programs funded through this grant program will be shared throughout the STEM Innovation Network. Professional development programs must be comprehensive, sustained, and intensive approaches to improving teachers' effectiveness in raising student achievement. The programs should create job-embedded professional development that is grounded in daily teaching practices and is designed to improve instruction. Tennessee's higher education institutions have the expertise to develop and implement such programs. This close collaboration between higher education institutions, school districts, and STEM businesses will contribute to increasing student achievement in STEM disciplines.

In May 2011, the Tennessee Higher Education Commission awarded $1.8 million across 11 professional development programs in the first round of funding. An additional $4.2 million are available for funding in the second round of selection. As a competitive grant process, only those proposals meeting the high standards of the STEM Professional Development Review Committee will be selected to receive funding.

The second round projects will be for the period of May 2012-December 2013. Proposals are due on **Monday, March 12, 2012 by 4:30 pm (CT).** Please see page 9 for an *approximate* timeline for the review and approval process.

II. PROGRAM GOALS AND OBJECTIVES

Tennessee is in the process of establishing the STEM Innovation Network, which will pull together resources and strategies in order to link college and career readiness with economic strength and business competitiveness. As such, highly effective and innovative STEM instruction is needed for K-12 teachers.

The primary objectives of this program are:
- To deliver high quality, research-based STEM professional development to K-12 teachers to improve pedagogical skills and content knowledge
- To align with the goals of Tennessee's First to the Top plan, including: School readiness, College and Career readiness, Implementing the Common Core Standards, and Postsecondary Access and Success.
- To create a STEM Professional Development best-practices warehouse for use throughout Tennessee's STEM Innovation Network to ensure sustainability of this professional development beyond funding from Race to the Top. Through replication and sustainability, it is implied that those professional development programs which are models of good practice will and can be accessed and replicated widely throughout Tennessee's STEM Innovation Network in order to foster a deeper learning of STEM content knowledge for all students.

III. PROGRAM GUIDELINES

Eligible Institutions and Partnerships
An eligible institution is a regionally accredited institution of higher education that houses a teacher education program or partnership with a teacher education program. This includes all regionally accredited public and private, two and four-year colleges and universities. An institution may submit up to ten proposals. An institution may partner with another institution on a proposal. For collaborative proposals, funding is to be administered by the lead/sponsoring applicant. Collaborative proposals count against the limit of ten for the lead applicant.

Each proposal must ensure collaboration between the school of arts and sciences (or equivalent department) and the school of education. Evidence of this partnership must include a project director from each school/department with a total of two project directors per proposal. The purpose of this partnership is to have a content expert and a pedagogy expert.

A minimum of two local education agencies (LEAs) must be included in the professional development in order for the proposal to be considered. *Preference may be given for those institutions that demonstrate a partnership with a Tennessee STEM business.*

Required Program Components
The research literature focused on effective professional development over the past several years has clearly indicated basic components of professional development programs that are linked with increased teacher quality, change in practice, and improvement in student performance. The STEM Professional Development Programs should follow the requirements outlined below, which include the research-based practices and activities that have been linked with successful educational reform programs.

1. <u>STEM Content focus</u>
   Proposals should include activities that combine subject matter content with pedagogy and how students best learn that content. A leadership team for each proposal will consist of faculty from the School of Education and College of Arts & Sciences (or institutional equivalency) to ensure

expertise within both content and pedagogy. This partnership should support a program design that will include co-teaching of program activities to effectively model pedagogy, while also building content knowledge.

*All proposals focusing on mathematics **must** integrate and adhere to the Common Core Standards. More information on the Common Core Standards can be found at www.corestandards.org and www.parcconline.org.*

2. Active learning
    The majority of activities (80%) should focus on engaging teachers in active learning (participation as a student in the professional development – active engagement, rather than passive learning, e.g. lecturing, taking notes) where facilitators model effective pedagogy and teachers experience learning as their students would. Proposals should clearly describe the activities of the program, including a comprehensive program timeline and schedule of summer academies, weekend sessions, or after-school sessions.

3. Coherence
    A) Program activities should work to address existing beliefs among participants regarding current teaching practices for the subject, in an effort to transform and improve teaching practices, where appropriate. Active learning should expose participants to strategies including problem and project based learning, inquiry, and the use of manipulatives to enhance teaching practices. Program activities should clearly describe these experiences.
    B) Programs are required to demonstrate consistency between the activities of the professional development program and the expectations of partnering schools districts. Letters from partnering school districts should be included to indicate a district's willingness to support needed teacher time and use of new strategies in the classroom. *Letters of support should be unique for each school district and demonstrate the need and expectations for participation in the professional development program.*

4. Continuous Learning
    Programs must include sufficient duration to ensure teachers are supported to make changes in practice, beliefs, and knowledge. Each program should include a minimum of 80 contact hours and include a summer academy (one to two weeks), with follow-up across the school year. Follow-up should include face-to-face meetings and online opportunities to collaborate during implementation. Proposals should include contact hours for each activity and indicate if the activity planned is face-to-face or virtual. The duration of this program is designed to encourage a summer opportunity for teachers to experience problem-based learning and problem solving through teams during the academy. These PBL issues should be grounded in real community and school situations.

5. Professional Learning Community
    Participants must include at least two teachers from different STEM content areas at each participating school in an effort to establish professional learning communities within school districts. Professional learning communities (PLCs) committed to continuous improvement, collective responsibility, and goal alignment will foster learning that increases educator effectiveness and results for all students. Learning communities convene regularly and frequently during the workday to engage in collaborative professional learning to strengthen their practice and increase student results. The PLCs should be designed to support embedded professional development by building on the day-to-day practices of teachers, focusing on examples from individual classrooms and schools to improve instructional practices. Letters of support from participating school districts should address the ability to develop a professional learning community.

Sustainability and Replication Requirement
As mentioned previously, as part of the STEM Innovation Network in Tennessee, highly effective professional development programs will be replicated and disseminated widely through the regional hubs in order to provide continual professional development for K-12 STEM teachers beyond the funding period of Race to the Top.

As such, the development of a sustainability plan to support the continued collaboration and growth of participants beyond the duration of the program is essential. As part of the required evaluation component, each program needs to have a sustainability plan in place.

Proposal submission is an assumption of acknowledgement and adherence of state rights (please see Section VIII for Legal information).

IV. PROPOSAL SUBMISSION REQUIREMENTS
For full consideration, all proposals must use the attached submission form and all sections must be presented in a *clear and concise* format.

Proposal Cover Letter
Proposal cover letter should include title of grant application and name of sponsoring institution, along with the appropriate signatures.

Abstract and Project Data
Provide an abstract (1-2 paragraphs) summarizing the objectives of the proposal and the format of the program. Fill in all data requirements.

Demonstration of Need
Thoroughly document how the project-related needs were determined. Determination of needs can be documented by sources such as the school system's staff development/school improvement plan, or a needs assessment instrument may be used to identify gaps in professional development. Other data may be used to complete the documentation such as summaries of student performance on grade level assessments. The demonstration of need should justify the professional development program. Each school district should have specific strengths and areas of need. The professional development programs should target those areas of need. The demonstration of need should show participation by a minimum of two school districts, an explanation of their high-need areas, and how the professional development program will address the high-need areas identified.

Project Description
Provide a project description (not to exceed 5 pages, single-spaced, 12pt Times New Roman). The project description will include the following sections as subheadings and each proposal must address each area of the project description clearly and concisely.

- Section I *Overview, Goals and Objectives*
  This description should provide an overview, statement of goals and objectives, and anticipated outcomes. The goals should be measurable and attainable. The objectives should specify what teachers will know and be able to do in the classroom as a result of the project.

- Section II *Required Program Components*
  Describe in specific detail how the program will include each of the required components listed in the previous section: (1) STEM Content Focus, (2) Active Learning, (3) Coherence, (4) Continuous Learning, and (5) Professional Learning Community.

- Section III *Program Activities and Timeline*
  Provide a detailed timeline outlining the program components. Describe the content knowledge and pedagogy that will be covered over the course of the program.

- Section IV *Partnership*
  Identify the leadership team of the project, and provide a paragraph for each person describing: (1) Level of commitment and involvement with the project, (2) background and qualifications, and (3) Relevant prior experience. *Note: please do not provide curriculum vitae to fulfill this requirement.* Separately, describe how the resources of the institution, as well as any other partners, will contribute to/or support the program. Letters of support for each partnering school district and business partner are required and should include the number of teachers being served by the professional development program. All letters of support should provide clear evidence of a strong recruitment plan and a commitment from school districts to assure participation by teachers.

Significance and Evidence of Feasibility
Each proposal should include data that will support the significance of implementing the proposed program and data that will establish evidence of the feasibility that the program will result in increased pedagogical content knowledge, teacher quality, and student achievement in the given areas of focus. This area must include consideration of scientifically-based research that is related to the knowledge, skills, and dispositions related to program components.

Evaluation
The fundamental issue of accountability is to determine to what extent classroom implementation has been achieved, the effectiveness of the implementation, as well as an understanding of the necessary steps to enhance the observed effects of the project in the future. The purpose of project evaluation is to determine the extent to which the project influenced changes in classroom teachers' content knowledge, instructional practices, and student achievement in the focus area.

All programs that are funded through this program will participate in a coordinated evaluation conducted by the Tennessee Higher Education Commission (THEC) in partnership with the Tennessee Consortium on Research, Evaluation and Development (TNCRED) - the consortium coordinated by Vanderbilt University to collect project-specific data and conduct evaluations within Tennessee's First to the Top reform efforts. Each program will develop a 25 item pre/post content knowledge assessment for their program that will be administered to the participants (this must be included in the application). Scores will be reported to the evaluation team. In addition, each program will be asked to administer other evaluation measures that will be used across all programs and selected by TNCRED.

Each program participant (teacher) will also be asked to submit a videotape of his or her teaching practices prior to participation in the program, during the program, and at the end of the program to evaluate changes in teaching practices and student engagement/learning. The evaluation may also include interviews with program staff and participants, focus groups, collection of archival program data, etc. by TNCRED. *Programs will facilitate the evaluation data gathering process, but are also encouraged to develop and implement their own formative evaluation materials to inform the scope and focus of the*

program. The summative evaluation that will be conducted will be shared with all programs. Each participant will be required to sign an agreement to participate in an evaluation component.

Budget Summary and Narrative
The following is a guide for each line item of the budget.

- **Salaries and benefits and taxes**: Include only project personnel who are salaried employees on your university payroll, not persons to be hired as consultants. Salaries for project personnel must be reported as a function of their regular appointments and salaries. Salary must be linked to services rendered; therefore, each salary draw down should reflect the real time contributions of personnel on the project. Salaries must not exceed 20% of the total grant amount. For calculating fringe benefits, use the institution's current rate. This is only applicable to salaried employees only.
- **Professional Fee/Grant Award**: List persons who will be hired as consultants and the contracting fee. Include consultant travel but do not charge fringe benefits. Consultant fees (excluding travel) may not exceed $300 per day.
- **Materials and supplies**: Includes all materials and supplies distributed to the teachers and any materials and supplies used to prepare for the workshop.
- **Staff travel**: List total amount of travel for project staff. Do not include teacher travel or consultant travel in the line item. Travel costs are not to exceed state rates, which are:

  > Mileage - $.46 per mile
  > Hotel - $70 per night*
  > Meals and Incidentals- $46 per day *

  *Hotel, meals and incidentals are reimbursed at different rates for some counties. Please refer to the "Standard Reimbursement Schedule (Effective October 1, 2009)" for the county by county variations to the travel rates. Tennessee Comprehensive Travel Regulations may be obtained from the following website: **http://tennessee.gov/finance/act/documents/policy8.pdf**
- **Communications**: Include total amounts for postage, shipping, long distance, etc.
- **Equipment rental**: Include total amount of anticipated expenditures for equipment needed to be leased during the project.
- **Printing and duplicating**: List total cost for reproduction of printed documents.
- **Participant travel and subsistence**: List anticipated cost for transportation, lodging and meals for teacher participants. (See state rates for maximum allocations.)
- **Participant stipends**: List all stipends paid; in the rate of up to $100 per full day and $50 per half day.
- **Participant tuition and fees**: Grant funds cannot pay for tuition and fees. These expenses should be waived by the institution.
- **Indirect Costs**: Calculate indirect costs using the institution's rate. Preference will be given to proposals that propose an indirect cost rate of 8% or lower. If using a different indirect cost rate, please include a copy of the indirect cost agreement with the Federal Department of Education.

Please provide an electronic copy of the budget document in Word format on the disk or flash drive upon submission of proposal.

Disclosure of Grants
If a project director is currently serving as a director on another THEC or First to the Top funded initiative (i.e. Improving Teacher Quality grant, Round I STEM Professional Development grant, UTeach or TSIN) please provide a brief narrative describing the other projects and the distinct features of this proposal, certifying that resources and activities of the projects will not overlap.

V. PREPARATION AND SUBMISSION OF FORMAL PROPOSAL

An institution of higher education may submit a maximum of ten proposals for consideration. A project director may be funded as the lead for only one project, but may participate in other projects in which he or she is not a director. To ensure review of the application for funding, all parts cited in these instructions should be included and all pages numbered sequentially.

Request for funding may not exceed **$200,000**. The term of the project is from May 2012 to December 2013. All projects must provide professional development in the interdisciplinary STEM fields for a minimum of **25** teachers and include teachers from at least two school districts.

The proposal must be formatted in the following manner:
- All pages should be single-spaced, 12pt, Times New Roman font
- Each major heading must be bold
- All pages must include page numbers with title of program at the bottom right of each page.
- Each component needs to start on its own page, clearly titled at the top of the page.
- Appendices must be clearly labeled, relevant, and of reasonable length (no more than 15 pages). Additional pages may be included; however, the review committee cannot guarantee full review of appendices of excessive length.

The full application should include the submission forms filled out in their entirety as well as:
- Bibliography – All cited references must be included in bibliography.

Submit one (1) original signed proposal, seven (7) copies, and one electronic copy (on disk or flash drive) of the application to:

Wesley Hall
Race to the Top Program Coordinator
Tennessee Higher Education Commission
404 James Robertson Parkway, Suite 1900
Nashville, TN 37243

VI. PROPOSAL REVIEW AND AWARD PROCESS
Each proposal will be reviewed by a member of the STEM Professional Development Review Committee, according to a rubric designed specifically for the guidelines of this RFP. Each proposal will be reviewed by no less than three committee members. The reviewers will then be responsible for giving careful review of the entire project without bias. The proposal will be scored and ranked within each sub-committee reviewing the same proposals. Projects will be awarded funding based on the quality of the proposal, content focus, number of teachers served, and the use of budgeted funds. See the attached document titled "STEM Professional Development Grant Scoring Rubric" for scoring guidelines.

Notification Procedures
Upon receipt of proposals by THEC, notification will be provided via email to each project director listed on the application's cover sheet. If notification has not been received by March 15, 2012, please contact Wesley Hall.

Once the proposals have been reviewed, each project director will receive notification of the committee's decision. Project directors may request reviewer comments by email to Wesley.Hall@tn.gov. Please provide the name of the institution, proposal name, and names of directors in the email. Reviewer comments will be provided via email in pdf format only.

VII.   GRANT TIMELINE

02/01/2012   Release of Request for Proposals

02/17/2012   Conference Call for RFP Questions and Answers – 1:00 PM (Central)

03/12/2012   All Proposals Must be Received at THEC by 4:30 PM (Central)

03/29/2012   STEM Professional Development Review Committee Meets to Select Grantees

04/02/2012   Approval and Notification of Funding by THEC

05/15/2012   Mandatory Project Director's Workshop in Nashville

Conference Call
A technical assistance conference call will be held at 1:00 PM (Central) on Friday, February 17, 2012. Prospective applicants are strongly encouraged to participate.
Conference Call Dial-in Number: 1-888-757-2790
Participant Passcode: 686378

Due Dates
All due dates are absolute dates, **NOT POSTMARK DATES**. Please plan ahead to assure receipt of proposal at THEC by 4:30 PM Central on March 12, 2012.

VIII.   LEGAL

Title VI
Title VI of the Civil Rights Act of 1964 requires that federally assisted programs be free of discrimination. Should you feel you have been discriminated against, contact your local Title VI representatives. The Title VI Coordinator at the Tennessee Higher Education Commission is Will Burns. He may be contacted at 615.741.7571.

Funding
Funder reserves the right to fund a proposal in full or in part, to request additional information to assist in the review process, to reject any of the proposals in response to the RFP, and to reissue the RFP and accept new proposals if the STEM Professional Development Review Committee determines that doing so is in the best interest of the State of Tennessee.

All cost incurred in preparation of proposal shall be the responsibility of the lead applicant or project directors. *Proposal preparation costs are not recoverable from grant funds*.

The Tennessee Higher Education Commission (THEC) reserves the right to withhold and recoup funding if at any point the program is not adhering to its objectives, goals, or contractual obligations. THEC staff reserve the right to sit in on any program session and workshop or conduct site visits to ensure the fidelity of this program.

State Use of Work Products
The State shall have royalty-free and unlimited rights to license to use, disclose, reproduce, publish, distribute, modify, maintain, or create derivative works from, for any purpose whatsoever, all work products created, designed, developed, derived, documented, installed, or delivered under this Grant subject to the relevant terms that will be included in the Grant Contract. All grant projects are subject to inclusion in the state's Electronic Learning Center and STEM Innovation Network.

Acceptance of Terms and Conditions
Submission of a proposal indicates acceptance of all stated terms and conditions.

Contact
Questions regarding the Request for Proposals may be sent to Wesley.Hall@tn.gov.